

Hanan Hakim

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PROFESSIONAL EXPERIENCE

180 Degrees Consulting Imperial — Associate Consultant, Strategy London, UK | Nov 2025 – Jan 2026

- Diagnosed a client attrition crisis with a hypothesis-driven issue tree across 2.9M records, isolating 82% of departures to a single root cause and packaging it as a board-ready recommendation.
- Quantified the commercial stakes by linking a 1–3% attrition shift to £161–484M of tuition revenue, building the case that anchored a £30k investor seed-raise.
- Directed a market-expansion analysis across a £41B sector, evaluating 4 growth options on a value-vs-feasibility matrix to deliver a prioritised 3-segment strategy.

The Henry Royce Institute — Graduate Research Assistant (MSc Thesis) London, UK | Jan 2025 – Aug 2025

- Evaluated five competing materials technologies on performance, stability, and cost under a fixed budget, owning the weighted investment framework and accelerating the resource-allocation decision by 4–6 weeks.
- Developed a predictive model ($R=0.78$) across 5 catalysts to pinpoint the three highest-value conversion pathways for a waste-glycerol stream (~10% of biodiesel output), redirecting R&D toward the strongest economics.
- Built an open-source Python analysis toolkit that cut per-report turnaround ~25% and was adopted as the lab's standard workflow, enabling end-to-end delivery of the thesis workstream presented to the Imperial review panel.

Imperial College Energy Society — Research Energy Analyst London, UK | Nov 2024 – Jul 2025

- Architected the techno-economic module of a DESNZ-commissioned, three-university climate report (Imperial, UCL, Cambridge), pricing grid-scale storage at £49–66/MWh, stress-tested across ~10 sensitivity inputs, as a decision-grade input for UK government stakeholders.
- Synthesised regulatory and TRL dynamics across 5 jurisdictions into decision briefings that shaped the leadership team's storage-technology positioning in the DESNZ report.

Atomalyst Group Indonesia — Founder & Consultant Surakarta, Indonesia | Feb 2023 – Aug 2024

- Founded and scaled the advisory from zero to a four-person team, owning the full client mandate across ~£550k of engagements for Forbes Global 2000 firms (chemicals, beauty, aerospace-defence).
- Structured a plastics-substitution strategy for a Forbes Global 2000 manufacturer, mapping where biodegradable chitosan-based materials could displace over-engineered polyolefins, and sized the chitosan value chain to a multi-billion-dollar market to 2033.
- Led technical diligence with senior R&D and procurement leaders, building TRL/risk frameworks adopted into the client's procurement process and surfacing ~20% in addressable cost savings.

Nano Center Indonesia — R&D Researcher South Tangerang, Indonesia | Jun 2022 – Dec 2022

- Validated a lower-cost raw-material substitute for a clean-energy (perovskite solar) application across 20+ structured experiments, lifting yield ~20%, and delivered the diagnosis and sourcing recommendation directly to the client's R&D leadership.
- Formulated a 6-month commercialisation plan for a hydroxyapatite consumer product, pairing CAPEX/OPEX analysis with market research to underpin the client's go-to-market decision.

LEADERSHIP & EXTRACURRICULAR

Indonesian Scholars International Convention — Vice Project Leader London, UK | Feb 2025 – Jul 2025

- Orchestrated the turnaround of a stalled 30-person team to deliver a 500+ attendee convention 8–12% under a £6.5k budget, raising £7.5k in sponsorship.

Bumi Buddies — External Affairs Lead Surabaya, Indonesia | Apr 2020 – Sep 2022

- Mobilised partnerships with 5 NGOs and school networks to deliver climate and plastic-waste education to 800+ students across 10 institutions, owning programme design and team coordination.

YouthHive Indonesia — Founder & President Jakarta, Indonesia | Jul 2020 – Apr 2022

- Launched a youth-mentoring programme and designed a 7%-selective intake (10 of 150); all 10 mentees secured university placement (100% conversion).

EDUCATION

Imperial College London — MSc Advanced Materials Science & Engineering (Merit, DIC) London, UK | Sep 2024 – Sep 2025

Distinction in Machine Learning for Materials (applied data analytics); dissertation on waste-to-value catalysis.

Stanford University (Professional Education) — Energy Innovation & Emerging Technologies Online | Apr 2025 – Nov 2025

Coursework: Renewable Energy & Storage; Clean-Energy Transition Economics; Hydrogen Economy; Building Energy Efficiency; Sustainability Strategy.

Sepuluh Nopember Institute of Technology — BSc Chemistry Surabaya, Indonesia | Aug 2017 – Aug 2021

Cum Laude (top 10% of cohort); Thesis: chitosan-templated mesoporous hydroxyapatite; coursework in materials and physical chemistry.

PUBLICATIONS & AWARDS

Publications: 4 peer-reviewed works, including first-authored “Green synthesis of hydroxyapatite from oyster shells for dye-wastewater removal” (AIP Conf. Proc., 2025); review in *J. Alloys & Compounds* (2023).

Awards: Geneva Challenge 2025 Global Finalist (100+ teams); Bicentenary Global Futures Scholarship offer, Univ. of Manchester (2024); BUMI Leadership Scholar, Top 6 (2020).

SKILLS & CERTIFICATIONS

Skills: Materials & circularity (polymer substitution, biodegradable materials, waste valorisation); financial modelling (techno-economic, LCOS; LCOMD tools); data (Python: Pandas, scikit-learn; SQL; Advanced Excel); strategy toolkit (market sizing, issue trees, weighted criteria, due diligence).

Certifications: McKinsey Forward Programme (2025); ISO 9001:2015 (2020). **Languages:** English (C1), Bahasa Indonesia (Native), Arabic (Basic).